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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MACARTHUR, VICTOR L	

ART UNIT	PAPER NUMBER
3679	

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/813,049	AMES, ROBERT	
	Examiner	Art Unit	
	Victor MacArthur	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) *9,18,19,32 and 33* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,10-17 and 20-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 March 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I, Species I, which pertains to claims 1-8, 10-17 and 20-31 in the paper filed on 02/15/2006 is acknowledged. The traversal is on the grounds (1) that there is only a single search for all embodiments, (2) that both inventions can be examined without serious burden; and (3) that the Species restriction was not in a format that sufficiently detailed reasons why the species are distinct or reasons for insisting upon restriction between Species. This is not persuasive as follows:

1. The applicant has failed to show that there is, in fact, only a "single search"; that the presence of only a "single search" would be a reason for not requiring a restriction requirement; and that "search" is the only criteria for determining burden.
2. The Applicant has failed to establish that there is no serious burden present. There is a clear and serious burden on the examiner to have to search for all of the features of the non-elected invention, consider and apply any prior art found, and then consider and respond to any arguments submitted by applicants relating thereto. Applicants have not indicated how this otherwise would not be the case.
3. Standard Patent Office procedure for Species restrictions does not require a special format as argued by the applicant. Applicant's attention is directed to MPEP 809.02(a), which details the proper format to be used when requiring election between patentably distinct species. MPEP 808.01(a) indicates that there is no need to show a separate status in the art or separate classification for an election requirement between species. Be that as it may, the previous Office Action details

how the species are independent by pointing out corresponding figures that are mutually exclusive. Restriction therebetween is necessary since examination of all species would be overly burdensome. The applicant has failed to point out otherwise or to state for the record that the restricted embodiments are "obvious variants" of one another. In this regard, there are only two alternatives possible, i.e., the species are either patentably distinct or not patentably distinct. If the applicant still disagrees with the examiner's position that the species are patentably distinct, applicant should note the first full paragraph of page 4 of the previous Office Action.

The requirement is still deemed proper and is therefore made FINAL.

Claims 9, 18, 19, 32 and 33 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Invention/Species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 2/15/2006.

Drawings

The drawings are objected to because:

- They fail to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 200 (paragraph 80).
- The lines, numbers and letters are not uniformly thick and well defined in accordance with 37 CFR 1.84(l).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing

sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 22 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 22 recites "said rope includes a weakened portion which has a material failure load smaller than that of the weakened region of said breakaway connector, so that said rope breaks before said weakened region". This is in direct contradiction to claim 20, from which claim 22 depends; claim 20 reciting "said web defines a weakened region of said breakaway connector which will fail to completely release the rope from said breakaway

connector". It is not possible for the rope to fail before the weakened region, as required by claim 22, and for the weakened region to fail before the rope, as required by claim 20; in a single embodiment. Claim 23 depends from claim 22 and is thereby similarly rejected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson (U.S. Patent 5,913,670) (see marked-up figure below).

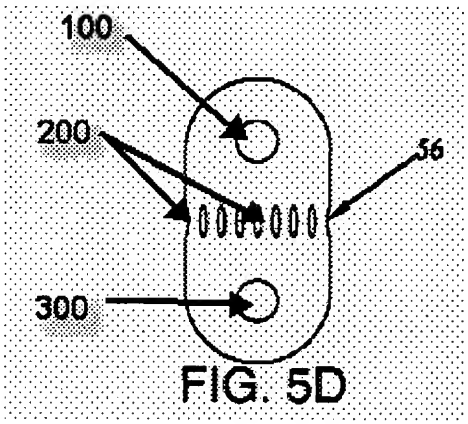

FIG. 5D

Claim 1. Anderson discloses (fig.5d) a breakaway connector, comprising: first connecting means (100) for connecting with an external device; and second connecting means (200, 300) for maintaining a length of rope in a bent state and for holding the rope until a load applied to the rope reaches a predetermined level at which said second connecting means completely release

the rope, said second connecting means comprising a breakaway element (200) that will fail under said load of said predetermined level to release the rope.

Claim 2. Anderson discloses the breakaway connector of claim 1, wherein a material failure load of said breakaway element is from about 500 to about 600 lbs (col.6, ll.30-31 and ll.64-66).

Claim 3. Anderson discloses the breakaway connector of claim 1, wherein a material failure load of said connector is minimal at said breakaway element (in as much as the applicant's invention is).

Claim 4. Anderson discloses the breakaway connector of claim 1, wherein said second connecting means further comprise guiding means (56) for guiding the rope around said breakaway element to define a bent section of the rope at said breakaway element and first and second sections of the rope on opposite sides of the bent section.

Claim 5. Anderson discloses the breakaway connector of claim 4, wherein said guiding means comprise a passage (passage of 56) and said breakaway element is positioned in said passage to divide said passage into first (left most channel of 56) and second channels (right most channel of 56) for accommodating the first and second sections of the rope, respectively.

Claims 6-8, 10-17 and 20, 21, 22-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Faircloth (U.S. Patent 6,219,957).

Claim 6. Faircloth discloses (figs.1 and 2) a breakaway connector, comprising a body (10) having a through hole (11); and a web (23, 22) extending transversely of said through hole and dividing said through hole into first (portion of 11 receiving 21) and second (upper portion

of 11 perpendicular to the fist portion, as seen in fig.2) channels; wherein a material failure load of said web is smaller than a material failure load of said body.

Claim 7. Faircloth discloses the breakaway connector of claim 6, wherein said web is an integral part of said body and does not extend for a full axial extent of said through hole.

Claim 8. Faircloth discloses the breakaway connector of claim 6, wherein said web has a notch (notches between 22 and 23) extending axially of said through hole, said notch being positioned in a central region of said web for accommodating, at least partially, a bent section (21)of a rope being inserted in the first and second channels to pass around said web.

Claim 10. Faircloth discloses the breakaway connector of claim 6, wherein said through hole includes, in an axial direction thereof, first (section of 11 receiving 21) and second (upper horizontal section of 11 bounded and parallel with upper 13, as seen in fig.2) sections angled (at roughly 40 degrees) with respect to each other, said web being positioned within said first section.

Claim 11. Faircloth discloses the breakaway connector of claim 10, wherein the angle (roughly 40 degrees) between said first and second sections is from about 30 to about 60 degrees.

Claim 12. Faircloth discloses the breakaway connector of claim 6, wherein said body defines an eye (26) for connection to an external device.

Claim 13. Faircloth discloses the breakaway connector of claim 6, wherein said body is a ring-shaped body (body of 10 as seen in fig.2) that extends circumferentially for less than 360 degrees and has first and second end portions (upper and lower tips on right end of 10 as seen in fig.2) circumferentially spaced from each other; said ring-shaped body defines a loop (c-shaped loop of 10 as seen in fig.2 in cross hatching) for connection to an external device; and a spacing

between said spaced first and second end portions defines a slot (slot of 11) extending from an outer circumferential surface of said body into said loop.

Claim 14. Faircloth discloses the breakaway connector of claim 13, wherein said through hole includes first (upper half portion of 11 receiving 21) and second (lower half portion of 11 receiving 21) sections formed in said first and second end portions, respectively, said web being positioned within one of said first and second sections of said through hole.

Claim 15. Faircloth discloses the breakaway connector of claim 14, wherein said first and second sections of said through hole are at least partially aligned (to receive 21).

Claim 16. Faircloth discloses the breakaway connector of claim 15, wherein said first and second sections of said through hole are straight sections (parallel with upper and lower 13) that are angled with respect to each other.

Claim 17. Faircloth discloses the breakaway connector of claim 14, wherein said first and second sections of said through hole extend transversely of said slot without directly opening into said loop.

Claim 20. Faircloth discloses (figs.1 and 2) a breakaway connection, comprising a rope (20) and a breakaway connector (10), wherein said breakaway connector comprises a body (body of 10) having a passage (passage receiving 21) for the rope and a transverse web 22, 23) positioned in said passage; a length of said rope being received in said passage includes first and second sections (upper and lower half sections of 20 as seen in fig.2) on opposite sides of said web and a bent section (21) which connects said first and second sections and comes to rest on said web when one of the first and second sections of said rope is pulled; and said web defines a weakened region (at 23) of said breakaway connector which will fail to completely release the

rope from said breakaway connector when a load applied to said web via said bent section of said rope reaches a predetermined level (col.2, ll.35-65).

Claim 21. Faircloth discloses the connection of claim 20, wherein friction between the first and second sections of said rope and at least one of said passage and said web is sufficient to hold said rope against slipping within said passage until said weakened region fails.

Claims 22 and 23. Faircloth discloses the limitations of claims 22 and 23 in as best understood by the examiner in as much as the applicant's own invention does (see 35 U.S.C. 112 2nd paragraph rejection above).

Claim 24. Faircloth discloses the connection of claim 20, wherein said passage includes a first section (left portion of 11 as seen in fig.2) in which said web is positioned and which is divided by said web into two channels (above web and below web) each accommodating one of said first and second sections of said rope; and a second section (right portion of 11 as seen in fig.2) free of said web so that said first and second sections of said rope are allowed to physically contact each other in said second section of said passage (i.e., in the open mouth of the right side of 11).

Claim 25. Faircloth discloses the connection of claim 24, wherein inner walls of said first and second sections of said passage are aligned to facilitate insertion of said rope between said first and second sections of said passage.

Claim 26. Faircloth discloses the connection of claim 20, further comprising underwater gear (col.1, ll.59-62) connected to an end portion of said first section of said rope, an end portion of said second section of said rope being left free without being tied up into a knot or a noose, so

that said end portion of said second section of said rope can pass through said passage to release said rope from said breakaway connector.

Claim 27. Faircloth discloses the connection of claim 20, further comprising underwater gear (col.1, ll.59-62) connected to an end portion of said first section of said rope, an end portion of said second section of said rope being tied up into a knot (col.1, ll.11-16) which must be untied before said end portion of said second section of said rope can pass through said passage to release said rope from said breakaway connector.

Claim 28. Faircloth discloses the connection of claim 20, further comprising underwater gear connected (col.1, ll.59-62) to an end portion of said first section of said rope, wherein, when said first section of said rope is pulled towards the underwater gear, said first section of said rope presses said second section of said rope against a wall of said breakaway connector, thereby preventing the second section of said rope from slipping within said passage (in as much as the applicant's invention is).

Claim 29. The connection of claim 20, further comprising a swivel (col.1, ll.59-62), said body further comprising a connecting portion connected with said swivel.

Claim 30. The connection of claim 20, wherein said body is a ring-shaped body (cross hatched c-shaped portion of 10, as seen in figure 2) that extends circumferentially for less than 360 degrees and has first and second end portions (right tips of c-shaped portion of 10) normally circumferentially spaced from each other; said ring-shaped body defines a loop for connection to an external member (col.1, ll.59-62); a spacing between said spaced first and second end portions is increasable, by virtue of a flexibility (inherent via flexibility of body material) of said body, to facilitate movement of a wall of the external member through said spacing before the rope is

attached to said breakaway connector; and said rope being attached to said breakaway connector crosses said spacing and prevents the external member from being disconnected from said loop.

Claim 31. The connection of claim 30, further comprising said external member, which includes a swivel (col.1, ll.59-62).

Allowable Subject Matter

The prior art does not disclose or suggest the following terminology:

--A breakaway connector comprising:

a ring shaped body having an orifice therein forming an eye; and a slot extending from the eye to an outside surface of the ring shaped body, the slot bisecting a side of the ring shaped body and forming first and second end portions in the body, each end portion positioned on an opposite side of the slot; and

first and second passageways extending through the first and second end portions, respectively; the first passageway having a longitudinal central axis that is oriented at a non-zero angle with respect to a longitudinal central axis of the second passageway; wherein each of the first and second passageways extend from opposite outside surfaces of the ring shaped body and meet to communicate with each other at the slot; and

a web extending transversely across and within one of the first and second passageways, the web being of smaller cross section than the ring shaped body such that the web forms a weakened region for receiving a rope to be released when a predetermined loading is transmitted to the web from the rope thereby causing the weakened region to fail; and

wherein the first and second passageways are arranged such that the rope can be inserted into the ring shaped body through one of said passageways to extend across the slot into another of said passageways and bend around the web to double back upon itself thereby exiting the body through the same passageway through which the rope entered the body.--

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Referring to breakaway connectors:

Kibler U.S. Patent 2,768,468

Ackerman U.S. Patent 5,772,371

Badura U.S. Patent 6,192,558

deDoes U.S. Patent 6,457,896

Higgins Pub. No. US 2005/0050790

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor MacArthur whose telephone number is (571) 272-7085. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-3600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

VLM
April 16, 2006

Daniel P Stodola

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